ABSTRACT

METHOD AND APPARATUS FOR PREDISTORTION OF AN X-DSL LINE DRIVER

5

An apparatus and method is provided for minimizing in channel distortion in an X-DSL line driver is disclosed. The apparatus may be incorporated in an existing X-DSL architecture without additional circuitry. Out of band monitoring of a channel is implemented to adaptively minimize out of band interference and in band distortion. A

10 unique training sequence, suitable for DMT line codes is set forth. The training sequence allows a full spectral characterization of the downstream signal space with a single upstream monitoring tone. The invention may be used with multi-channel X-DSL line drivers interfacing with any of a number of multi-channel supply architectures. The apparatus may be applied with equal advantage to communication

15 protocols other than X-DSL. The apparatus may be applied with equal advantage in wired and wireless media.